

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Work Order ID 69802




Thursday, May 19, 2011 1:03:59 PM



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Item ID: D6011-115 Accept  Setup Start 
Revision ID: Stop 
Item Name: Crosstube Material
Start Date: 5/19/2011 Start Qty: 24.00  Cust Item ID:
Required Date: 6/15/2012 Req'd Qty: 24.00  Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start 
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130  HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00							
140  Packaging Packaging	Identify as per dwg & Stock Location: <u>LG</u> Memo	0.00 0.00							
150  QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

Rm 12-5-14

12/5/14
ME
12-05-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 69802



Parent Item: D6011-115



Parent Item Name: Crosstube Material

Start Date: 5/19/2011


Required Date: 6/15/2012

Start Qty: 24.00

Required Qty: 24.00

Comments:

IPP Rev:A 01.08.17 New Issue SM
IPP rev B 07.09.18 rev A1 dwg EC verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6011-115P  Crosstube Material		Purchased	No			100	Each	0.0000	1	24			



440/5 (18)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

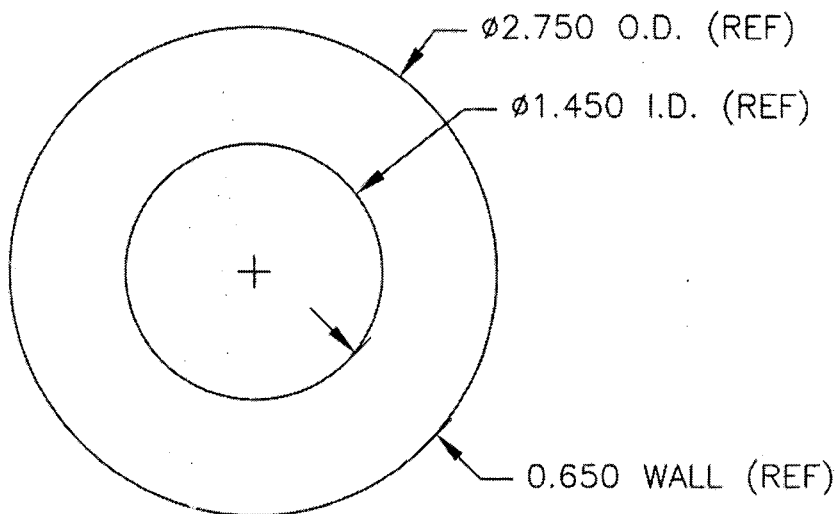
NOTE: Date & initial all entries



DESIGN #	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D6011	REV. A SHEET 1 OF 1
DATE 01.08.16		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	01.08.16	NEW ISSUE	
A1	02-01-29	UPDATE TOLERANCE ON OD.	

SPECIFICATION CONTROL DRAWING

RELEASED
01.08.17



NOTES

- 1) D6011-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 115" LONG TUBE: D6011-115

- 2) MATERIAL: 2.750 OD x 0.650 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi

- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS: ANSI H35.2 AS FOLLOWS A1
O.D.: ± 0.006 MEAN (± 0.012 INCLUDING OVALITY) ± 0.015 MEAN (± 0.030 INCL. OVALITY)
WALL: ± 0.020 MEAN (± 0.065 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH

- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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ALUnna ref. no.	42438/9
Customer PO.	PO. 14138
Date:	03.30.12

Dart Aerospace Po. 14138
D6011 - 115
Made in Germany Dest.: Hawkesbury Ont, Canada

free from live plant pests

S:\VERSAND\USA_Packliste\42438_9

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

Kunde:
Client:

Dart Aerospace Ltd.

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 425/12

Cert No.: / No. du certificat:

PO14138

Bestellnummer:

Order No. / No. de commande

Auftrag: 42438/9

Our Reference/Notre Reference:

Produkt:

Product / Produit:

Rohre nahtlos gepresst
Tubes seamless extruded

Spezifikation:

Specification:

AMS - QQ - A - 200/11; Spezifikation Dart Aerospace D6011

Werkstoff:

Alloy/Alliage:

7075

Zustand:

Temper/État

T 6511

Abmessung

Size / Dimension

2,750 INCH x 1,450 INCH x 0,650 INCH x 115,000 INCH
D6011-115 2.750 x 0.650x 115

Kennzeichnung

Marking/Marquage:

ALUnna - Cert.No. 425/12 - 7075 - T6511 - Cast No. 84070 - AMS - QQ - A - 200/11 - 2.750"OD x 0.650" Wall -
Heat Lot No. 1301475 - ALUnna Order Conf. No. 42438/9-1 - P.O. 14138

Lieferung

Delivered Material / Matériel délivré:

pcs.

lbs

Country of Manufacture: Germany

26

1298

Products are in accordance with applicable RoHS

Elemente ohne Grenzwerte:

einzelnen max. 0,05 %, insgesamt 0,15 %

1. Chemische Analyse

Chemical Analysis / analyse chimique

Charge/ Cast No.	min.	max.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
			0,40	0,50	1,2 2,0	0,30	2,1 2,9	0,18 0,28	5,1 6,1	0,20					
84070			0,07	0,13	1,43	0,04	2,47	0,19	5,79	0,03	0,01	0,02			0,0001

Hydrogen content: 0,14

ccm/100 g Al Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No
min. max.	77,0	66,0				
1 2	87,870 89,320	81,345 83,085	10,0 11,0			1301475

RMS max 25 µ" - Ist: 18 µ"

**Ergebnis der
Prüfungen:**

Test results:

Resultats:

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order
Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

mergardtri

28.03.2012



Certified acc. DIN EN ISO 9001:2008 and DIN EN 9100:2003
valid until 2013-11-10

Cert.- Reg. No.: 001959 QM08; 001959 ASH

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany



ALUnna

Abnahmebeauftragter

EXTRUSION INSPECTION SHEET

ULTRA SONIC MEASUREMENTS

TUBE #	TOTAL LENGTH	DIA two readings	INSIDE DIA	wall thickness measured w/vern	Strightness at 12"	Rockwell Reading	LOCATION on tube	R1	R2	R3	R4
DWG	115.00"	2.750"	1.450"	0.650"	0.010"	N/A	MIDDLE				
1	115.00"	2.749"/2.752"	1.449"	0.637"/0.625"	0.004"	N/A	57.50"	0.648"	0.640"	0.649"	0.657"
2	115.00"	2.753"/2.748"	1.449"	0.639"/0.656"	0.008"	N/A	57.50"	0.648"	0.657"	0.644"	0.630"
3	115.00"	2.747"/2.749"	1.449"	0.643"/0.652"	0.010"	N/A	57.50"	0.635"	0.636"	0.646"	0.657"
4	115.00"	2.751"/2.751"	1.452"	0.636"/0.665"	0.016"	N/A	57.50"	0.643"	0.640"	0.640"	0.656"
5	115.00"	2.750"/2.747"	1.450"	0.643"/0.651"	0.008"	N/A	57.50"	0.628"	0.642"	0.648"	0.646"
6	115.00"	2.748"/2.751"	1.451"	0.645"/0.656"	0.007"	N/A	57.50"	0.643"	0.639"	0.638"	0.653"
7	115.00"	2.748"/2.752"	1.450"	0.643"/0.653"	0.006"	N/A	57.50"	0.654"	0.641"	0.649"	0.649"
8	115.00"	2.749"/2.752"	1.451"	0.638"/0.662"	0.007"	N/A	57.50"	0.651"	0.648"	0.641"	0.648"
9	115.00"	2.747"/2.748"	1.448"	0.647"/0.645"	0.014"	N/A	57.50"	0.643"	0.648"	0.641"	0.649"
10	115.00"	2.750"/2.752"	1.450"	0.647"/0.652"	0.012"	N/A	57.50"	0.644"	0.647"	0.644"	0.636"
11	115.00"	2.751"/2.749"	1.451"	0.638"/0.656"	0.015"	N/A	57.50"	0.641"	0.649"	0.643"	0.636"
12	115.00"	2.745"/2.752"	1.449"	0.640"/0.661"	0.009"	N/A	57.50"	0.648"	0.640"	0.641"	0.643"
13	115.00"	2.750"/2.752"	1.451"	0.644"/0.649"	0.008"	N/A	57.50"	0.650"	0.630"	0.642"	0.654"
14											
15											
PART # D6011-115		P/O# 14138		BATCH # B69802		Notes:					

REFERENCE ONLY

8/17/04

